Amendment to the Claims:

Claim 1 (original): High-speed rotor, in particular permanent-magnet rotor (1) for dynamoelectric machines of high power density, comprising at least one spindle (2) and a cylindrical sheath (4) coaxial with the spindle (2), and also a number of bodies (3) that are distributed between the spindle (2) and the cylindrical sheath (4), characterized in that a cavity-filling, compressed and cured filling compound is used for the pretensioned sealing and rigid joining of said parts (1,2,3,4).

Claim 2 (original): High speed rotor according to Claim 1, characterized in that the spindle (2) has at least one spindle shoulder (2g, 2h) and/or at least one spindle nut (2x) and at least one annular channel (2i) that lies between the spindle shoulder (2g, 2h) and/or the spindle nut (2x), and also at least one supply channel (2m) for feeding the filling compound.

Claim 3 (currently amended): High-speed rotor according to Claim 2, characterized in that the supply channel (2m) of the spindle (2) is connected to preferably symmetrically distributed supply channels (2k) and to at least one recess (2j) of the spindle (2).

Claim 4 (currently amended): High-speed rotor according to Claim 2, characterized in that there lies between the spindle shoulder (2g, 2h) and/or spindle

nut (2x) an annular channel (2i) that is used to receive the permanent magnets (3, 3a to 3c), and in that inserts (5a to 5d) made of electrically and magnetically neutral materials are used for the segmented positioning of the permanent magnets (3a to 3c).

Claim 5 (currently amended): High speed rotor according to Claim 2, characterized in that cylindrical shell-type armouring (4a) is situated on the spindle shoulders (2g, 2h).

Claim 6 (currently amended): High speed rotor according to Claim2, characterized in that the cylindrical shell-type armouring (4b) is clamped between two spindle nuts (2x) or a spindle shoulder (2g) and a spindle nut (2x).

Claim 7 (currently amended) High-speed rotor according to Claim 6 characterized in that externally and internally centring washer rings (7a, 7b), preferably having spacing knobs (8) are used to seal the points of contact of the spindle (2, 2g, 2h, x) and the armouring (4a, 4b).

Claim 8 (currently amended) High speed rotor according to Claim 6, characterized in that a cuff strengthened with sheet metal and having sealing lips made of natural or synthetic rubber (9) is used to seal the points of contact of the spindle (2, 2g, 2h, 2x) and the armouring (4a, 4b).

Claim 9 (currently amended) Method of producing a high -speed rotor according to Claim 6, characterized in that the rotor (1) is placed in a centring ring (6) preferably guided by the rotor spindle (2) to limit the asymmetrical expansion of the armouring (4a, 4b).

Claim 10 (currently amended) Method of producing a high-speed rotor according to Claim 1, characterized in that the rotor (1) is thermally treated in places.

Claim 11 (currently amended) Method of producing a high -speed rotor according to Claim 1, characterized in that the rotor (1) is statically and dynamically counterbalanced by controlled abrasion of parts contributing to mass.

Claim 12 (new): High-speed rotor according to Claim 1, characterized in that the supply channel (2m) of the spindle (2) is connected to preferably symmetrically distributed supply channels (2k) and to at least one recess (2j) of the spindle (2).

Claim 13 (new): High-speed rotor according to Claim 12, characterized in that there lies between the spindle shoulder (2g, 2h) and/or spindle

nut (2x) an annular channel (2i) that is used to receive the permanent magnets (3, 3a to 3c), and in that inserts (5a to 5d) made of electrically and magnetically neutral materials are used for the segmented positioning of the permanent magnets (3a to 3c).

Claim 14 (new): High-speed rotor according to Claim 3, characterized in that there lies between the spindle shoulder (2g, 2h) and/or spindle nut (2x) an annular channel (2i) that is used to receive the permanent magnets (3, 3a to 3c), and in that inserts (5a to 5d) made of electrically and magnetically neutral materials are used for the segmented positioning of the permanent magnets (3a to 3c).

Claim 15 (new): High speed rotor according to Claim 4, characterized in that cylindrical shell-type armouring (4a) is situated on the spindle shoulders (2g, 2h).

Claim 16 (new): High speed rotor according to Claim 3, characterized in that cylindrical shell-type armouring (4a) is situated on the spindle shoulders (2g, 2h).

Claim 17 (new): High speed rotor according to Claim 4, characterized in that the cylindrical shell-type armouring (4b) is clamped between two spindle nuts (2x) or a spindle shoulder (2g) and a spindle nut (2x).

Claim 18 (new): High speed rotor according to Claim 3, characterized in that the cylindrical shell-type armouring (4b) is clamped between two spindle nuts (2x) or a spindle shoulder (2g) and a spindle nut (2x).

Claim 19 (new): High-speed rotor according to Claim 5 characterized in that externally and internally centring washer rings (7a, 7b), preferably having spacing knobs (8) are used to seal the points of contact of the spindle (2, 2g, 2h, x) and the armouring (4a, 4b).

Claim 20 (new): High speed rotor according to Claim 5, characterized in that a cuff strengthened with sheet metal and having sealing lips made of natural or synthetic rubber (9) is used to seal the points of contact of the spindle (2, 2g, 2h, 2x) and the armouring (4a, 4b).

Claim 21 (new): Method of producing a high -speed rotor according to Claim 8, characterized in that the rotor (1) is placed in a centring ring (6) preferably guided by the rotor spindle (2) to limit the asymmetrical expansion of the armouring (4a, 4b).

Claim 22 (new): Method of producing a high -speed rotor according to Claim 7, characterized in that the rotor (1) is placed in a centring ring (6) preferably

guided by the rotor spindle (2) to limit the asymmetrical expansion of the armouring (4a, 4b).

Claim 23 (new) Method of producing a high -speed rotor according to Claim 6, characterized in that the rotor (1) is placed in a centring ring (6) preferably guided by the rotor spindle (2) to limit the asymmetrical expansion of the armouring (4a, 4b).